

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in this application.

Listing of Claims:


Claim 1 (Currently Amended): A flat panel field emission display comprising:
a screen having a phosphor coating;
an emission source opposite said screen which selectively excites portions of said phosphor coating to generate visible light; and
a black matrix provided on said screen, said black matrix being formed from praseodymium-manganese oxide of high resistance so that the black matrix does not drain electrons emitted from the emission source, whereby power consumption of the flat panel field emission display can be reduced.

Claim 2 (Canceled)

Claim 3 (Original): The display device of claim 1, wherein said emission source includes an array of field emitter tip cathodes.

Claim 4 (Original): The display of claim 3, wherein said emission source further includes a low potential extraction grid provided adjacent said field emitter tip cathodes.

Claim 5 (Currently Amended): The display of claim 4, wherein said array of field emitter tips is formed in a matrix addressable by row select control signals.

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Claim 6 (Original): The display of claim 5, wherein said extraction grid is a continuous electrode, and wherein said field emitter tip matrix is further addressable by column select control signals.

Claim 7 (Original): The display of claim 5, wherein said extraction grid includes a plurality of column electrodes addressable by column select control signals.

Claim 8 (Original): The display of claim 4, wherein said extraction grid is held at a substantially constant low potential value and said field emitter tips are held at a substantially constant potential value higher than said low potential value, and said screen includes a matrix of anode electrodes which are addressable by row and column control signals.

Claim 9 (Original): The display of claim 1, wherein said display provides color images and wherein said black matrix improves image contrast.

Claim 10 (Currently Amended): A flat panel field emission display, comprising:

a faceplate including a screen, phosphors provided on said screen, and a black matrix provided on said screen;

a baseplate assembly including a plurality of electron emission cathode tips arranged in an array and a low potential extraction grid;

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wherein said black matrix is formed from PrMnO₃ of high resistance so that the black matrix does not drain electrons emitted from the cathode tips, whereby power consumption of the flat panel field emission display can be reduced.

Claim 11 (Canceled)

Claim 12 (Original): The field emission display of claim 10, wherein said low potential gate is a continuous electrode, and wherein said field emitter tip matrix is further addressable by column select control signals.

Claim 13 (Original): The field emission display of claim 12, wherein said low potential gate includes a plurality of column electrodes addressable by column select control signals.

Claim 14 (Original): The field emission display of claim 12, wherein said low potential gate is held at a substantially constant low potential value and said field emitter tips are held at a substantially constant potential value higher than said low

potential value and said screen includes a matrix of anode electrodes which are addressable by row and column control signals.

Canceled
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Claims 15-28 (Canceled)

Claim 29 (Previously Presented): The display of claim 1, wherein particles of the praseodymium-manganese oxide have an average size of 2 micrometers.

Claim 30 (Canceled)

Claim 31 (Previously Presented): The field emission display of claim 10, wherein particles of the PrMnO_3 have an average size of 2 micrometers.

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Claim 32 (New): The display of claim 1, wherein the phosphor coating comprises non-luminescent conductive material.

Claim 33 (New): The field emission display of claim 10, wherein the phosphors comprise non-luminescent conductive material.

Claim 34 (New): A flat panel field emission display comprising:
a screen comprising a phosphor coating arranged to provide different color segments, and a matrix of anode electrodes;

an emission source opposite said screen which selectively excites portions of said phosphor coating to generate visible light; and

a black matrix provided on said screen, said black matrix being formed from a substantially insulating material,

wherein an anode switching scheme is used to drive the flat panel field emission display and the insulating material is of high resistance to prevent electrical shorting between the different color segments.

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Claim 35 (New): The field emission display of claim 34, wherein the phosphor coating comprises non-luminescent conductive material.

Claim 36 (New): The field emission display of claim 34, wherein the insulating material comprises praseodymium-manganese oxide.
